

**CLAIMS**

1. Polarized-wave splitter, which comprises at least the following components:

- 5       - a common waveguide (1) having a cross section suitable for letting at least two different polarizations propagate, the common waveguide having first and second ends, the first end constituting a common input/output (10);
- 10       - a first slot (11) placed at the second end of the common waveguide (1), the first slot letting waves propagate with a first polarization;
- a second slot (12) placed on a lateral part of the common waveguide (1), the second slot letting waves propagate with a second polarization;
- 15       - a first transition region (2) providing a change in waveguide cross section;
- a second transition region (4) providing a change in waveguide cross section;
- 20       - a first waveguide filter (3) having a first end connected to the first slot (11) via the first transition region (2), and a second end constituting a first individual input/output; and
- a second waveguide filter (5) having a first end connected to the second slot (12) via the second transition region (4), and a second end constituting a second individual input/output;

25       characterized in that the overall dimensions of the various components are such that the transfer characteristics of the splitter, within a transmit band and within a receive band, measured, on the one hand, between the common input/output and the first individual input/output and, on the other hand, between the common input/output and the second individual input/output, are better than the characteristics resulting from the sum of the characteristics of the components constituting the splitter, within

30       the said bands.

2. Splitter according to Claim 1, characterized in that the filters (3, 5) are symmetrical with respect to a mid-plane.

**3. Splitter according to either of Claims 1 and 2, characterized in that the components constituting the splitter are produced by moulding.**